

STEREO MOC Status Report
Time Period: 2007:358 - 2007:364

STEREO Ahead (STA) Status:

1. The following Ground System anomalies occurred during this reporting period:

- On day 358, the transmitter failed at station DSS-26 (DR #G108251). The track was switched to DSS-24 and all SSR data was recovered.

2. Ahead spacecraft performance continues to be very good with all subsystems performing nominally. IMU 2 continues to be used nominally on the Ahead spacecraft. The following list summarizes the spacecraft/instrument events which occurred during this week:

- The average daily SSR playback volume for Ahead was 7.5 Gbits during this week.

STEREO Behind (STB) Status:

1. The following Ground System anomalies occurred during this reporting period:

- None.

2. The Behind spacecraft experienced a significant Star Tracker anomaly last week on day 355. The following list summarizes the spacecraft/instrument events which occurred during this week including an update on the star tracker anomaly:

- The average daily SSR playback volume for Behind was 4.9 Gbits during this week. The data return this week was lower than normal due to the star tracker anomaly which reduced the data return on days 358 through 361.
- From DOY 358 through 361, tracks were manually commanded (no time tag commanding with the exception of an ephemeris update and a time update). The spacecraft was left on the -Z LGA at 633 bps spacecraft data outside of all tracks with the star tracker data usage suspended. During each track, star tracker use by G&C was enabled, the High Gain Antenna was enabled, and the data rates were increased to 720

kbps (except for DOY 359 when the signal strength criteria laid out was marginal and the data rate was only increased to 480 kbps). The SSR was played back until end of track -30 minutes when data rates were reduced back to 633 bps, the -Z LGA was enabled, and star tracker use was suspended. Operating in this fashion reduced the time available for SSR playback and resulted in approximately 40% loss of the SECCHI data. However, throughout this period the star tracker continued to operate nominally. On DOY 361 the time tag commands for the rest of the week and the following week were loaded to enable return to nominal unattended operation of STEREO Behind beginning with the switch to Space Weather broadcast following the track on DOY 361. At this time it is still not understood why the star tracker reset on DOY 355, why it would not remain in AAD mode when promoted by autonomy, or why it did get a solution and remain in AAD mode when promoted on DOY 357. A meeting with Galileo (the star tracker manufacturer) was held on DOY 361 and they were informed of the anomaly and will begin investigating when the facility re-opens. Throughout this period the spacecraft remained in Fine Sun Pointing Operational Mode and the instruments continued to operate nominally and collect science data.

- Normal unattended operations began on DOY 362 and continued nominally through the rest of the week.